



Elevation of Blenheim towards the Garden. (From *Vitruvius Britannicus*, vol. i.)

THE POSSIBILITIES OF AN EIGHTEENTH-CENTURY REVIVAL.

By ARTHUR T. BOLTON [A.],

Soane Medallist 1893, Institute Essay Medallist 1895.

WHAT to do with the eighteenth-century style seems likely to prove the opening architectural problem of the twentieth century, as the intervening years would seem too short even to start a newer current of fashion than that which now sets so strongly in the direction of what, in ordinary parlance, is alternatively described as "the eighteenth-century" or "the Georgian style."

Every year of late has seen this increasing tendency, though it may be only by looking back ten or twelve years that the change both in the ideas and in the attitude of the student towards the work of that epoch becomes clearly evident. Mr. Blomfield's recent book, however, as being the first serious attempt to grapple with the whole subject of the English Renaissance from the architectural point of view, may, though its real aim is to favour an earlier century, prove all that is required to direct many architects to the latest revival.

Practitioners who would otherwise never give the time and study necessary to convert what are ordinarily somewhat hazy ideas, as to the achievements and aim of the architecture of that epoch, into a serious and working knowledge of the capabilities of the style, will be drawn by this and other such publications into the current of fashion that is leading clients to require the work in hand to be in "the Georgian style."

It may be supposed that *Vitruvius Britannicus* has advanced in value, and that the kindred books of the same period now stand in a very different estimation from what they did, say, twelve years ago; while, as regards the buildings themselves, it is quite curious to read the flattering notice in Mr. Blomfield's book of such a work as Prior Park, when one can remember the contempt in which it was openly held but a few years back.

The present question, however, is, what can be expected from a revival of eighteenth-century architecture; to judge of which prospect some regard must be paid not only to the characteristics of that epoch, but also to the purpose to which that style as revived is likely to be applied. One would be inclined to state that pre-eminently the work of the eighteenth century was house building. It is the great mansions that first suggest themselves to the mind's eye as the achievements of the style—Castle Howard, Blenheim, Houghton, Goodwood, Hotham, Kedleston, Prior Park. All crowd into the memory as definite impressions of architectural

conceptions, that created some effect in our minds, whether favourable or the reverse. It was of such a house that Sir Gilbert Scott, speaking in fact of the garden front of Stowe, with its great octastyle Corinthian portico upon a lofty flight of steps, could, in later life, record, "I well remember the kind of awe with which the stately approach inspired me, and how vast it appeared to my young imagination."

The real character, however, of the great house of this epoch can scarcely be better drawn than has already been done by an eighteenth-century writer himself, for the solid sense of Dr. Johnson made him a veritable "Daniel come to Judgment" upon these profuse erections. The account commences—he attacked it violently—"It would do excellently for a town-hall: the large room with the pillars would do for the judges to sit in at assizes; the circular room for the jury chamber; and the rooms above for the prisoners." It would almost seem, in fact, as if the passage was prophetic, that the Doctor had foretold the true intent and destination of the style which time to come was to develop and justify, for it would appear that to the municipality is due the resurrection of the style, that there is something akin to the dignity of alderman and county councillor in the solid qualities, which extend even to dullness, of the eighteenth-century mansion.

If this anticipation of the application of the style should prove a true one, it would be a valuable corrective to the rather exhausted possibilities of scientific planning: for a vestibule, a hall, good staircase, and straight corridors, with rooms on either side, about sum up the achievements of the century in that respect. It would be appalling heresy, perhaps, to suggest that, after all, in a block of offices the rooms might as well have one label as another, though one may have a suspicion that this is about what it amounts to in a few years' time—what with reorganisations, new developments in work, and changes of the primary intention for which the building was erected. Something of this sort exists elsewhere, when one official plan is found much like another, so that a foreigner is somewhat indifferent to the local use of the building, provided that he is impressed by the stateliness of the approach, the grandeur of the hall, and the clearness and definiteness of the disposition of the interior. As we saw above, Dr. Johnson could suggest off-hand a totally different use for Kedleston, while Blenheim has many of the qualities of a State museum.

It is certainly a little difficult to see who is going to erect such stately mansions for his own occupation. In the eighteenth century these extravagances were possible from the tripled value of the land, and consequently of the rentals of the country gentry, while a new system of agriculture had spread wealth through the farming classes. Green tells us that in the middle of the century the country positively grew weary of its monotonous prosperity. Such conditions scarcely exist to-day, though it is true we have sufficient millionaires already—and with African and other developments are likely to have yet more—men to whom the costly burden of such a house would be a trifle; but, then, the mere building would be nothing in comparison to the life to be led in it, the eighteenth-century house being but the reflection of eighteenth-century life.

To gain an idea of that life in its daily home aspect we could not do better than turn to the great novelists of the epoch, and glean from the pages of Richardson, Fielding, and Goldsmith some glimpses of the ideas and habits of the men and women who peopled these palaces. The first impression thus gained will be that of the contrast to our present existence, of the leisure that was theirs, freedom from the whirl and contest of present-day society. Why, the very length of the novels themselves is appalling to the most leisurely of modern readers, and is sufficient of itself to seal up such tomes from the curiosity of this generation.

"How will you bestow your time," asks the owner of a *Bedfordshire and a Lincolnshire seat*, of his lady, "when you will have no visits to receive or pay, no parties of pleasure to join

in, no card-tables to employ your winter evenings, and, even as the custom is, half the day summer or winter?" Three or four of the neighbouring gentry calling upon him at midday he describes as "horrid drinkers"; and complains, "I sha'n't be able to get away not-to-night perhaps; for they have nothing to do but to travel round the country and beat up their friends' quarters all the way; and 'tis all one to them whether they stay a night or a month at a place—they are like a snowball, and intend to gather company as they go, to make a merry tour of it for some days together."

Such jaunts would seem the outcome of an existence that otherwise consisted of an early rise at about six, a walk in the garden, "a sweet airing in the chariot," the arrival of visitors about twelve, followed by refreshments in the garden alcove, dinner about two, cards and a dish of tea for the afternoon, then a ride or "airing in the coach," with a return to supper at nine, the day ending in a final departure of the company at eleven, when they were in a position to do so.

Such is no unfair illustration of the essential frivolity of the epoch. Neither in architecture nor in other arts was there by the end of the century any depth of judgment or conviction, so that there is no harshness in Mr. Blomfield's application of "frivolous" to the work of the fashionable architect of that day. Of this frivolity as it affected architecture we get glimpses in references to, or attempted descriptions of, buildings, that occur in the novelists' pages. Probably the "tasteful Grecian" pervades the large house, a country villa is a "sweet, rural, and convenient place," the farmhouse is "iruly neat," while an air of romantic grotesqueness is as much sought after as the black boy whom every lady of quality required to attend upon her.

A further affectation of "life according to Nature," filtered through the pages of Rousseau, leaves a mark on the contemporary fiction. It met with stern treatment from Johnson, as in the well-known passage where he exposed its nature by a transfer to the animal creation of the sentiments expressed. But all these sentimentalities are reflected in the final stage of the decay of the Anglo-classic style, for it is well to remember that the eighteenth century has its Chinese phase, and all but includes the Hindooism of the Pavilion, as well as the romantic plasterings of Strawberry Hill. Just as in its literature, though the age can boast of Fielding, the thoughtful student of nature, it has to own also to the writer of the empty nonsense of the "Castle of Otranto." The century, however, had opened in a different vein, and if we look at the external aspect of the age, it is curious to note that the outburst of national energy, that culminated in the glories of the field of Blenheim, had a parallel phase in the fortunes of the Anglo-classic. The genius of Churchill finds a counterpart in that of Vanbrugh, the one architect who, with all his faults, so palpable to the everyday critic, had some conception of what has to be done in any attempt to reconcile the inherent romantic element of the race with classic traditions that are the outcome of education and training.

If the revival of the style, as such, were likely to have any permanent outcome, it would be by the taking up of the problem at this point; but genius is required to fuse two such conflicting forces in a palatable compromise. It would be but in harmony, however, with the best traditions of Anglo-classic, which is in essence a hybrid, for the classicism of St. Paul's, for instance, is but skin-deep, as, it may be alleged, will be that of any genuinely English work.

To make sure of this conclusion, it may be found not a bad test to take the opinion of some student or critic of Latin origin, whose judgment of English architecture will be found usually at fault, and, to our thinking, even perversely so, in his neglect of what we admire, or selection of that of which we take little account. Again, in another way, see how, in Italy, the portico, or dome, or other simple element in design, will suffice for centuries of architectural treatment, which is expended in refining its detail without demanding that extension of its forms which the romance of English taste demands from our designers.

Average English judgment of eighteenth-century work, straying, as it does, from the true classic standpoint, would be that it is dull; and it may fairly be alleged that it was the want of natural outlet that made the Greek, the Chinese, and the Indian as well as the "Monastic" so much in demand at the close of that century. Even now some candid architect will tell you, supposing his education to have been a free one, that he does not see much in the Georgian: that it has, for instance, only three kinds of window—the square, the circular, and the venetian; and with such an attitude of mind little development on pure classic lines is to be looked for. Again, for the limitations of eighteenth-century work, taking a small country or suburban house in all its stages of growth up to the appearance of the great architect who has revolutionised domestic architecture, can we decide that the Grecian, the rural Italian, the Gothic, and other variety villa, was in a hopeful case?—nor do the pages of all *Vitruvius Britannicus* afford us much insight into the future possibilities of these relinquished experiments.

Turn, also, for a moment to the corresponding class of town houses. At this period took place a remarkable growth in the population of the great towns, manufacturing trade commenced that expansion which was to make it the paramount industry of the kingdom. We may take Harley Street and Gower Street as falling within the period, and admit that such work is in favour just at present; but still, honestly, as the work itself is honest, can an intelligent student call it other than dulness architecturally personified? It will be readily granted that there are details of homely workmanship of considerable interest in the lead fanlights, in the iron railings, and in the joinery; and, further, that the houses have the quality of unpretentiousness; but, still, how much of this has the merit of intention? And what is to be put down for the value of a direct negation of our present-day faults?

One may very well doubt if the verdict of the next century will materially modify the older impression that dulness is a quality almost inseparable from eighteenth-century work. It was but a reflection of the general condition of the people at the time: it was a period of consolidation, of domestic politics, and of home life. Of the first two Georges we read that their characters as nearly approached insignificance as it is possible for human character to do; and of Farmer George, that life at Court was as uniform as a monastery, such a cloud of dulness reigning there as plausibly to account for the follies of the English Sardanapalus who succeeded him.

The very appearance of the novel marks the eighteenth century, and in its characteristic form of interminable letters illustrates the leisure and ease of the life of the time. It was an age of social arts, refinement being the word in most constant use. To be recognised as a person of quality, of mode, of town air, as contrasted with rusticity, other than assumed for the sham pastoral craze, was the constant ambition of the characters of the piece, and the interiors in which this drama of life was played bear the same stamp. If we are to have a genuine revival we should need some such conditions to be present once more; but of the probability of that the writer leaves any more up-to-date reader to form his own impression. One final aspect, and not the least important—who will give us the better side of the work of this epoch: its highly trained artizans, honest work, and superexcellent finish? There are no genuine eighteenth-century houses to be had at 9*d.* cube, with Swedish joinery and German-made fittings; while, to touch on a more delicate topic, the Young Duke of a slightly later epoch may have found "Sir Carte" somewhat heavy, with his everlasting quotations from "Palladio and the ancients"; but he would have readily recognised the solid study and extensive travel that equipped such a last representative of the eighteenth-century school.

Everyone of course does not want a genuine revival, just as not many under stress of constant competition, whose primary principle can hardly be other than that of the saving merit

of success, could adhere to those lines of architectural development that to-day seem, to the thoughtful, to be the most promising, namely, those proceeding from the conditions of each problem, the ideas it suggests, and the nature of the materials in which it has to be carried out. In all revivals there are those who think that all the old conditions can be reproduced, who see no reason to step beyond precedent and are not open to compromise; those, again, who sincerely believe in the style as a starting point for development; and, finally, those who merely catch at a fashion and are only too glad to affix any convenient label to the current business of the day.

SOME OLD ITALIAN BUILDING ACCOUNTS.

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LAST year, while engaged in researches among the old documents of some small mountain towns or villages of the Italian Riviera, there came under my notice a number of items relating to building accounts of two or three centuries ago which may possibly have an interest at the present day, partly for their own quaintness, partly as giving an insight into methods formerly in use, and partly as showing at all events the cost of labour and materials so long ago. The books and papers in question, courteously placed at my disposal by the authorities, were the municipal or communal records of the various villages, and the items referred to had usually to do with repairs to or construction of the public buildings, such as what we should now designate the town hall (*casa* or *cassa dell' università*), the fountain, the oven, above all the oil mill, and sometimes the church and priests' house (*casa canonica*).

The caligraphy of these documents is often very difficult to decipher; a fact not surprising if we consider how small were the educational advantages of those days in out-of-the-way places; and the orthography gave still more difficulties, being not only founded on the curious *patois* of the district, but very often regulated by phonetic considerations rather than by knowledge. It must also be remembered, in further explanation, if not justification, that the secretary's salary only amounted on an average to something less than four shillings a year! True it is that in many cases the whole year's statement of accounts did not occupy more than a couple of small pages for both income and expenditure, and often did not come to the equivalent of a dozen pounds of our money; but we find none the less interest in them because many of the payments were then still made in kind instead of cash, because the coins and measures in use were of a perfectly bewildering variety, and because the little communes borrowed and lent, got into debt or disgrace, or indulged in trifling jobbery, speculation, and law-

suits, much in the same way as bigger ones have done elsewhere.

Architects, as we understand the term, apparently had no existence in those days of simple elementary life and manners; at all events we find no mention of the name; but the *maestro*, or master-workman, was looked after when necessary by the *perito*, or expert, probably a master-mason himself, very often brought from a distance to give him that enchantment of honour which was of course wanting to the local prophet in his own country. These *periti* were paid by time or by visit, and their fees do not seem to have been extravagant. Even at the close of the last century (1799, to be quite exact), when the parish church of San Biaggio was in need of repairs, the president of the communal council proposed a resolution to the effect that the building should be examined "by two *esteri periti* (experts from a distance) to provide against the rain, which penetrates into the interior of the said church, and that there be assigned to the experts the suitable fee (*congrua mercede*) which they have asked for in three *lire* each" (say half-a-crown). That this fee was not excessive we may gather from the fact that nearly half-a-century earlier, in 1755, when Perinaldo wanted a public lime-kiln constructed, and some repairs done to the "Piazza," a *maestro* was sent for across the hills to Pigna, his fee being six *lire*, and a messenger was employed at the cost of ten *soldi*, half a *lira*, "to induce the said *maestro* to come" (*per risolvere detto maestro a venire*).

The kiln was carried out, inaugurated with suitable functions, and duly provided with the blessing of Heaven, for we have an entry: "Ditto to a priest for the Benediction and Mass for the prosperity of the furnace, 18 *soldi*."

The liberality of the clients of those days is hardly surpassed even now, for at the same time is noted the provision of "16 pints of wine at various times for the men who assisted"; but then wine was cheap, for the *pinta*, so far as we

can make out, equal to about a quart of our own day, only cost two *soldi*, say one penny.

Every little village had its own oil mill, known as "the edifice," and the word was spelt with reckless variety of form, *edificio*, *edefisio*, *deffisio*, *deficcio*, *de fisio*, &c., and not before the commencement of the present century do we find the modern appellation *molino da oglio*, but the old mills are still known as *i di fisi*.

The wages paid in those times are clearly traceable. At the end of the 16th century and the beginning of the 17th, a mason was paid one *lira* (20 *soldi*) per day, and a labourer received $\frac{1}{2}$ *lira* (10 *soldi*); but part of the labourers' work, especially in the transport of materials, &c., was done by women, who in 1598 were not paid more than 3 *soldi* per day, but in 1657 they had 5 *soldi*. Even to-day women are still similarly employed. By 1661 the masons' wages had risen to 1 *lira* 16 *soldi*, and even 2 *lire* per day, but the labourers were no better off than before. In 1647 a painter received 1 *lira* 4 *soldi* per day.

Building stone was found in the neighbourhood, and only required transport; but it must be remembered that no one of all the places we are considering had any sort of road beyond a mere steep mule-track, and most of them are still in the same condition to-day. The cost of transport was therefore an item of considerable importance, the charge for *bestie asinine* averaging 1 *lira* per day, which of course included the driver's services.

The neighbouring forests furnished an abundance of timber, while the lime of the district has always been excellent, and is so still. This lime was sold by the *mina*, a measure of 20 *rubbi*, equal to rather over 3 cwt., and it cost 1 *lira* 10 *soldi* per *mina*. It now averages 5 *lire Italiane* for the same quantity.

The coins in commonest use were those of the Republic of Genoa, chiefly the *lira*, *soldo*, and *denaro*, the *lira* being equal to 20 *soldi*, and the *soldo* to 12 *denari*, the *soldo* having a rough approximation to our halfpenny. To this standard the other coins found in the district were generally reduced in keeping the accounts.

These old accounts were kept accurately enough to all appearance, though very casually, and are full of quaint, curious expressions, which, quite naturally, will have most interest for those who possess some acquaintance with Italian. There was a yearly audit by the commissioner or "capitano" at Ventimiglia, who ruthlessly disallowed any items he did not approve of, and ordered the officials to provide the amount out of their own pockets; but he was not above accepting a present for himself over and above his fee of 2 *lire*, even though the item was duly charged to the commune.

The various translations here offered are kept as nearly literal as may be, so as to preserve the

character of the original, even at the risk of losing something in elegance.

Each village offers its own special interest, though a strain of strong resemblance runs through all, and in not a few instances the documents have migrated from one place to another, as the will or interest of the authorities might dictate. San Biaggio, in the Vallecrosia Valley, may be taken as a typical example to commence with; and the earliest documents yet examined date from 1598. Here, on the *die 22 di febraro*—note the curious inversion of the leading consonant, so characteristic of the Italian dialects generally—it is said:—

et piu p spesa allo defisio	And also for expenditure
visto le liste di maestro	on the edifice according to
lucha della spesa p nostra	the list of expenses of
meita	master Luke, for our half
£7 13 0	£7 13 0

It appears from many entries that communes were in the habit of allowing one of the people of the place to hold a half share in the mills, as implied in the above entry; and in one case a priest was so allowed, he being the highest bidder, and the cost of his half share being 290 *lire* 10 *soldi*.

This master Luke, whose surname is given elsewhere as Crovesio, was evidently the holder of a half share in the mill, and seems to have done as he liked with the property; while the commune paid not too willingly its share of expenditure for the repairs he had caused to be executed. There is an ominous entry of 1603:—

Piu dato a m ^{re} luca	Also given to master Luke
Crouesio p conto della	Crovesio on account of the
spesa ch esso dice ha fatto	expenditure which he says
nel edificio del universita	he has made (!) in the edi-
rubbi novi e libri tre oleo	fice of the university, nine
coputato a cavaloti 18 col	<i>rubbi</i> and three lbs. of oil,
doi il rubo.	calculated as 18 loads at
	2 (loads) the <i>rubo</i> .

The *cavaloto* would usually be a mule-load, but it is evident that a smaller quantity is here meant, for instance, such as a person could carry in the hand. The commune, or village, was generally known as a university, though the exact origin of this application of the term we are unable to give.

In 1612 some dispute had arisen with "master Luke"—probably the same individual mentioned above—for when the authorities wanted to put a lock on the "edifice," according to the orders of the "Capitano" (an official from Ventimiglia, and of considerable authority in the district), "master Luke" objected, as we see below:—

Itè dato ha maestro	Item given to master
bernardino amarberto p	Bernard Amalberto for go-
andare una mattina p met-	ing one morning to put the
tere la chaviadura allo	lock on the edifice, as the
deffisio, come ha ordinato	Captain has ordered, and
lo capitano et maestro	master Luke wouldn't have
lucha nò ha voluto, et cossi	it, and so six soldi were
i se dato a esso soldi sei	given to him.
£0 6 0	£0 6 0

This dispute with "master Luke" became so serious that there was an appeal to the court at Ventimiglia, with the result that an injunction was obtained against him; but he also managed to get an injunction against the "Priori," or superior councillors, and history is silent as to the final result.

In 1618 *Bernardino* has been succeeded by *Pietro*, possibly his son, and an account runs:—

Si sono datti ha mo.
pietro amarberto per sua
fatica allo tetto della cassa
della università p calsina
mine doe valle cō suo porto
lire quatro soldi octo

£4 8 0

There has been given to
master Peter Amalberto for
his work on the roof of the
Town Hall (lit. house of
the university) for lime,
two mine worth with its
carriage four *lire* eight *soldi*

£4 8 0

p porto delle pietre p lo
guòbo dello delificio

£1 0 0

For carriage of stones for
the repair of the edifice

£1 0 0

andare a dosaigna p
acòsiare la chiuadura allo
forno alla porta

£0 4 0

Going to Dolceacqua for
the mending of the lock to
the door of the oven (bakery)

£0 4 0

p mietta delle pietre dello
guòbo dello delificio lire tre
dico

£3 0 0

For half the stone for the
repair of the edifice three
lire, say

£3 0 0

An expert's certificate about the public oven, or *forno*, may be worth quoting, especially as it bears, not his signature, but that of the communal secretary, in the same way that many of the receipts were drawn up and signed:—

1682 alli 23 Ottobre.

Io M^{re} Gio Bartolomeo
Biamonte sono [stato] areve-
dere lo forno dell'università
essendo stato richiesto dalli
ufficiali e lo trovo in ogni
perfessione per cocire il
pane, e quando lo detto
fornaro uscirà lo debba
rimettere come ha trovato
in fede

Paolo Maccario.

1682, on the 23rd of October.

I, Master John Bar-
tholomew Biamonte, have
[been] to examine the oven
of the University, having
been requested by the offi-
cials, and I find it in per-
fect condition for baking
bread, and when the said
baker shall leave he must
reinstatate it as he has found
it. In witness whereof

Paul Maccario.

This expert's fee for the examination and certi-
ficate was 10 *soldi*.

Only a quarter of an hour's walk further up
the valley, the village of Soldano provides us with
more documents and interesting records. The
irreverent may smile at the conciseness of such
an entry as the following:—

li 24 Marzo 1647

Dato di Caparro a uno
maestro che ne imbian-
chiscie la madona una
dopia firenza

£15 10 0

The 24th of March 1647

Given as a deposit to
a master [workman] for
whitewashing the Madonna
one double *Firenza*

£15 10 0

piu p dati a li maestri p
conto dela madona

£29 5 6

Also given to the work-
men on account of the
Madonna

£29 5 6

Fortunately there is no doubt that the white-
washing here mentioned was for a church dedi-

cated to Our Lady, as an entry of a few years
later runs thus:—

piu speso p la frabrica
dela madona in maes-
trantia e giornate di omeni
in tuto

£28 8 0

Also spent for the build-
ing of the Madonna, in
workmanship and men's
time, in all

£28 8 0

e piu a d^a frabrica tra
legniami e schiodi in tuto

£17 14 0

And also, in the said
building, for wood and nails,
in all

£17 14 0

All these villages being entirely surrounded by
walls, the gates needed frequent repairs. In 1656
we have:—

piu speso in fare le porte
numero tre tra taole traveti
e schiavature insieme la
fatura dela porta dela piasa
tra lauorta e carzina e
maestro in tuto

£35 13

Also spent in making the
gates No. 3, for boards,
scantlings, and fastenings,
together with the work on
the gate of the Piazza for
vault [? arch] and lime and
master [workman] in all

£35 13 6

The church was usually repaired at the expense
of the commune:—

1659

piu speso a consare la
giesa scioe in carsi[na]
maestranza e servitu di
omini

£15 11 0

Also spent in repairing
the church, that is, in lime,
workmanship and men's
help

£15 11 0

The quaintness of the following entry of 1661
is undoubted:—

speso a inschiapala logia
tra maestro e carsina e
vino

£3 13 0

Spent for paving the
loggia between workman
and lime and wine

£3 13 0

The same year saw a new pavement laid in the
church:—

piu carsina p da lo bat-
tume de la giessa mine
cinque

£6 0 0

Also lime for making the
battume of the church five
mine

£6 0 0

This *battume* was the name given in former
times to the pavements, made of *calce nera*
(hydraulic lime) and rather coarse sand (*sabbia*),
which were laid about two inches thick, and then
beaten with canes for two or three days (hence
the name). When the work had hardened some-
what it was beaten again and finished with a
smooth flat instrument of wood. Some of these
pavements are still to be found here and there in
houses and churches, and they resemble marble
for hardness; but work of this class does not
succeed nowadays. It has been superseded by
the ordinary cement floor; yet the word *battume*
still remains in use as the name for concrete, like
the French *béton*.

In 1672 stormy times were at hand for the
little village of Soldano. The "officers of war"
were ordering everything to be got in readiness
for defence, and the communal council had to
have recourse to a loan. The following entry will
be found interesting:—

Dovendo reparare il luogo
del Soldano p causa delli-
nimici cō far le porte
et provedare di quāto fa-

Having to repair the
town of Soldano on account
of the enemy by making
the gates and providing

cesse di bisogno per ordine dell'ill^{mo} Sig. Cap^{mo} fatto li 23 Luglio del 1672 sottoscritto dal Can^{re} Giuseppe Filippi si habbiamo fatto imprestare £100 con il consentimento delli duoi tersi del luogno comenepare p linstrumento fatto dal Sig Noaro £100 0 0

whatever is necessary, by the order of the Most Illustrious Signor Captain, made on the 23rd of July 1672, countersigned by the Secretary Joseph Filippi, we have borrowed [lit. made to lend] 100 *lire* with the consent of two thirds [of the representatives] of the town, as appears in the deed drawn up by Signor Noaro £100 0 0

fare le porte et redusar le altre porte del luogogiorate otto e mesa £15 6 0

ing the gates and altering the other gates of the town eight days and a half £15 6 0

p giornate di huomini e Serrare num. 11 et piu due d'huomo qualle agiutava a scaicare le tavole al maestro £9 2 0

For No. 11 days men's time and sawing, and also two of a man who helped in carrying [lit. unloading] the boards for the master [workman] £9 2 0

piu p ciodi di novo fatti p le porte et agiontarne di gangari delle porte £7 16 0

Also for new nails made for the gates and adding hinges to the gates £7 16 0

Then follow items with regard to the new gates:—

p ferro p fare li gangari ossia ciavaiione delle porte uno rubo e meso £5 12 0

For iron for making the hooks or fastenings of the gates one *rubo* and a half [= about 27 lbs.] £5 12 0

p ciodi 100 e piu altri di pesso libri cinque piu grossi £6 3 0

For 100 nails, and also other big ones, five lbs. of bigger ones £6 3 0

p duoi legnami di pino p fare le porte et piu una rovere £5 13 0

For two pine trees to make the gates and also one oak £5 13 0

p maestransa in serrare = segare li suol^{li} legnami p

For workmanship in sawing the said trees, for mak-

It will be observed that the technical terms have a generic and indefinite character which adds considerably to the difficulty in translation; and even in the present day the differentiation has not been carried so far as with us, thereby often causing confusion in the mind of a student. To take a simple instance, *carsina*, the *patois* for *calcina*, is used, not only in its primary sense of lime, but also and usually for mortar.

(To be continued.)

REVIEWS. LXVIII.

(185)

HISTORIC ORNAMENT.

Historic Ornament: A Treatise on Decorative Art and Architectural Ornament, from Prehistoric Times to the Present Day. By James Ward, Author of "The Principles of Ornament." Fully illustrated. In 2 vols. 8o. Lond. 1897. Price 7s. 6d. each vol. [Messrs. Chapman & Hall, Henrietta Street, W.C.]

In treating this subject, Mr. Ward has set himself the task of outlining the history of decorative art as applied to architecture and the minor arts from the Old Stone age to the present day. Truly a wide range!

The author, conscious of the limits of a work of this nature, disclaims having produced anything more than a handbook for students and for those "who may desire to have an introduction to the fascinating study of Historic Ornament." Nevertheless, he has brought together in his two volumes an astonishing amount of concise and well-arranged information, which must be the result of much careful research and study in museums and libraries. In glancing through the illustrated pages, one cannot but be impressed by the evident universality of art, to which throughout the ages and in every clime man has turned as the next necessity to food and warmth.

The following passage from the Introductory Chapter indicates the spirit in which the study is to be approached:

We learn from these examples that the successful designer of ornament should have a thorough knowledge of the historic styles, not for the purpose of reproducing their forms, but in order to discover for himself the methods by which the old artists arrived at the successful treatment of nature and of former styles, so that by the application of his knowledge, derived from the study of nature and the works of former artists, he may be enabled to give to the world some original and interesting work.

This is sound advice, and to it might be added that the study must be of the original works of art themselves, and that a book should be used merely as a guide to that study, or for reference.

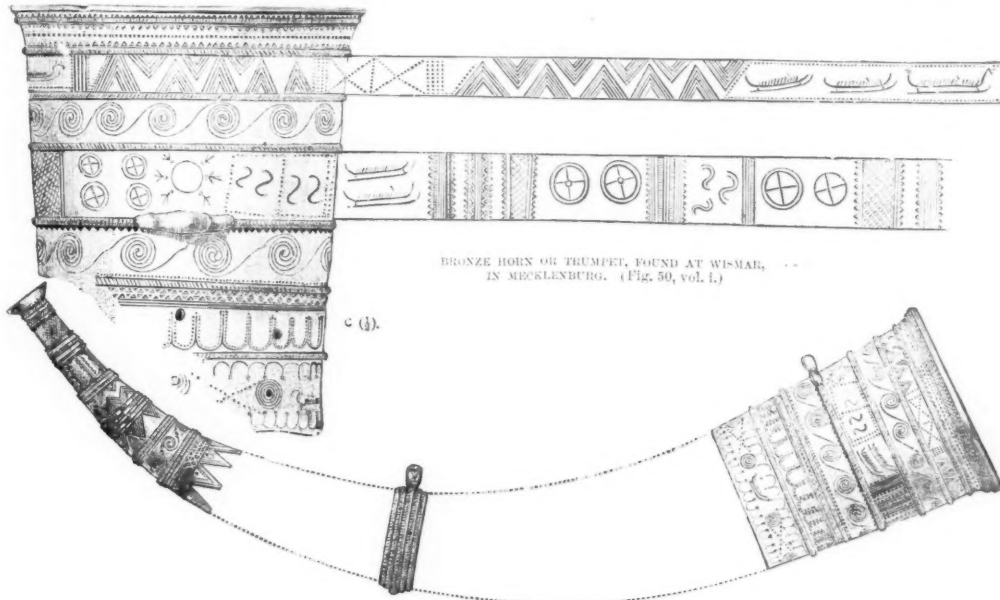
From the illustrations of the etchings on bone, representing various animals realistically treated, we gather that the cave-men of the early Stone age were a very artistic race, who had not yet acquired any symbolic art. All decorative art was originally derived from symbols, mostly with religious meaning, and from the entire absence of these symbols it seems possible that no religious system had yet been developed. Passing through the later Stone period, in which men were less artistic than their predecessors, though more skilled in the mechanical crafts, we come to the Bronze age, and it is startling to mark the extent to which religious symbolism, and therefore priestly science, had grown. In the bronze horn of this period, almost every part of the ornament can be referred to religious symbolism.

Worsaae thinks that this horn was used in the worship of the gods in the early Bronze age, owing to the great number of sacred signs engraved on it. Sun-wheels, sun-

snakes and sun-boats, developed into spiral ornament, may be seen on it.

Similar ornament has been found in almost

themselves with the inventing of any origins for their gods, but simply borrowed them, as they did all their art, direct from the Greeks, merely



BRONZE HORN OR TRUMPET, FOUND AT WISMAR, IN MECKLENBURG. (Fig. 50, vol. I.)

every part of the Old World except Egypt and Assyria.

After interesting sketches of the Iron age, and of the lake-dwellers and their art, we pass on to the greater historic styles of architecture and ornament which occupy the remainder of the first volume. To enable the student to grasp the motive of some of these styles, brief sketches of the religions of the races who originated them are given. But the reader is not always made to feel the living spirit of the faith which moulded and was moulded by the genius of the people, and without that spirit the dry bones, as it were, of the religion do not live. Nor is it quite true that the Romans "did not trouble

substituting Latin names for their borrowed deities instead of the original Greek ones." Or that "All historic art and architecture, whether classic or what not, since the days of Pericles, is

based on Greek art, notwithstanding the many modifications which we see in Byzantine, Saracenic, Romanesque, and their offshoots. All of them owe their life and vitality to Greek traditions and to Greek principles." The Greek attributes with which the court poets of the Augustan age invested their ancient gods did not materially influence the religion of the people, and very shortly after this age had passed, the old Roman style of arch construction re-asserted itself, and forced the Greek orders into mere



CINQUECENTO FLORAL ORNAMENT. ACANTHUS, OAK, CONVULVULUS, &c. (Fig. 424, vol. I.)

M M

subsidiary ornament. In this parent of the Christian styles surely the main principle was Roman and the secondary Greek.

The architecture and other arts of the Egyptians, Chaldeans and Assyrians, Phœnicians and Persians are described, and many examples are given. These styles are always interesting, and contain much that was good art, but though it may be legitimate to borrow ideas from such exotic forms, nothing is more to be deprecated than copying from them, as is sometimes done, especially in the minor arts. Indian, Chinese, and Japanese architecture is lightly touched upon. Several good examples of Saracen arabesques and lattice-work are given. Considering their importance, the Christian styles are not very fully treated. The chapter on Renaissance is rich in specimens of carved panels, and contains a spirited defence of the arabesques of Raphael and his pupils in the Loggia of the Vatican.

The Cinquecento artists were better craftsmen than the Romans. The design and delicacy of finish on some of the sculptured ornament of the sixteenth century have never been excelled in any period of the world's art history. . . . It is cheap and plausible to say that a style is dead with the people who created it; but this is not what the artists of the sixteenth century said, and we know what they produced out of a dead style. By all means let us have originality, if it is good art, but let us have the good art first.

The second volume treats wholly of the minor arts, which were only touched upon in the first volume, and contains excellent chapters on pottery, enamels, ivory carvings, metal-work, furniture, textile fabrics, mosaics, glass, and the decoration of books. The account of pottery is a full one, with many good examples of ancient

and modern ware. The beauty of these objects depends so much upon colour, that black and white illustrations cannot give the full representation of them; but they form a valuable aid and guide to museum study.

The shapes of the Greek vases vary in the different periods, getting more elegant as they approached the middle period — the fifth and the first half of the fourth century B.C. — and larger in size with the handles more elaborate in the later periods. . . . Greek ceramic ware, like the Etruscan and Roman, was coated with a scarcely perceptible thin glaze, supposed to be composed of a vitreous alkaline that merely hardened the clay body and left a very faint polish on the surface. . . . The Greeks in their vase paintings observed strictly the æsthetic laws of proportion and space division as they did in their architecture. The precision of touch which they displayed is remarkable, and the skill in the freehand rendering of their geometric and floral borders, not to speak of their figure-work, is astonishing when we think that if they made a mistake on the absorbent biscuit ware on which they painted, it could not be altered without showing the defect.

Persia has been noted for its pottery from very early times, and it is probable that Persian workmen were brought to Spain by the Arabs, their work resulting in the Hispano-Moresque ware, famous for its beautiful lustre. The numerous Italian maiolica potteries of the fifteenth and sixteenth centuries were very famous, and

the wares of Caffaggiolo, Pesaro, Siena, Gubbio, Urbino, Castel-Durante, and Faenza receive the attention they deserve, the illustrations being mostly of specimens in the South Kensington Museum. Della Robbia ware having been designed and executed for architectural decoration, would have been more appropriately criticised and illustrated in its relation to architecture. In the sixteenth century some Italian artists and work-



CHAMPLEVÉ ENAMEL OF GEOFFREY PLANTAGENET.
(Fig. 97, vol. II.)

men set up potteries at Nevers and Lyons; but their productions, though similar in design and workmanship to the Italian, were generally inferior. A better class of pottery, and one thoroughly French in the spirit of its design, is found in the beautiful Rouen ware. The other French potteries, of which Sèvres is the most important, and the wares of Delft, Dresden, Persia, China, and Japan are described, and Lambeth, Fulham, Staffordshire (Wedgwood), Chelsea, Bow, Derby, and Worcester all receive notice, each style being illustrated.

Our attention is next directed to enamels, of which there are three varieties—the embedded or encaustic, the translucent upon relief, and the painted. The embedded has two varieties, the Cloisonné and the Champlevé, of which the former is the older, the ancient Greeks, Byzantines, and Chinese having employed it. In this method the metal foundation is hollowed out where required, and the design formed by thin gold ribbon cemented to the foundation, the spaces being filled in with vitreous enamel and fired. The Champlevé is made in a similar way, except that the gold ribbon is omitted. "The earliest Champlevé enamel of the Limoges school is that of the monument to Geoffrey Plantagenet, who died in 1151. It is now in the Museum of Le Mans." This is an excellent example of Gothic design of this type, with its diaper and border and freely treated pictorial architecture.

In the chapter on ivory carving an interesting account of the Consular diptychs and triptychs occurs.

These Consular diptychs were originally made of wood or ivory, and were hinged tablets that folded over each other, the outside surfaces being carved elaborately, with a portrait or figure of the consul or chief magistrate of the province in the centre, the inside surfaces being used for writing purposes. . . . It was the custom of the consuls to send these consulars in the form of a diptych or triptych as a present to the bishop of a church in his province, to show his patronage and goodwill, and they were usually placed on the altar of the church in order that the congregation should see them and remember the giver in their prayers. This custom led to the making of the diptychs (*two-leaved*) and the triptychs (*three-leaved*), for the purpose of the altar decorations, and usually on the plain inner leaves were inscribed the names of the newly baptized Christians (*neophytes*), benefactors to the church, dignitaries of the same, and Christian martyrs. The use of these led to the later magnificent painted and carved altars of the triptych order in Christian churches.

The accompanying illustration shows a leaf of a Roman diptych beautifully carved in ivory, now in the South Kensington Museum. It was found at the bottom of a well at Montier-en-Der, and its fellow is in the Musée de Cluny in Paris. Under the heads of Metal Work and Furniture are shown various objects of art, specimens of Gothic chalices and candelabra, Greek chairs and couches, bronze tripods, Mediæval tables and couches, Renaissance, Boule, and Chippendale work. To the chapter on Textile Fabrics a section on Mediæval ecclesiastical

vestments would have been welcome; and that on Glass, though good as far as utensils are concerned, is meagre as to window glass.



LEAF OF A ROMAN DIPTYCH.
(Fig. 113, vol. II.)

Enough has now been said to show the scope and nature of these delightful volumes, which, in spite of occasional crudeness in phraseology, are generally well written, earnest in tone, and entirely free from affectation. They cannot fail to interest and instruct the student and the scholar, the collector and the artist. J. HUMPHREYS JONES.

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ROCHESTER.

The Cathedral Church of Rochester: A Description of its Fabric and a Brief History of the Episcopal See. By G. H. Palmer, B.A. 8o. Lond. 1897. Price 1s. 6d. [George Bell & Sons, York Street, Covent Garden, W.C.]

Of the admirable *Bell's Cathedral Series*, for the editing of which Messrs. Gleeson White and Edward F. Strange are responsible, "*Rochester*" is certainly not the best.

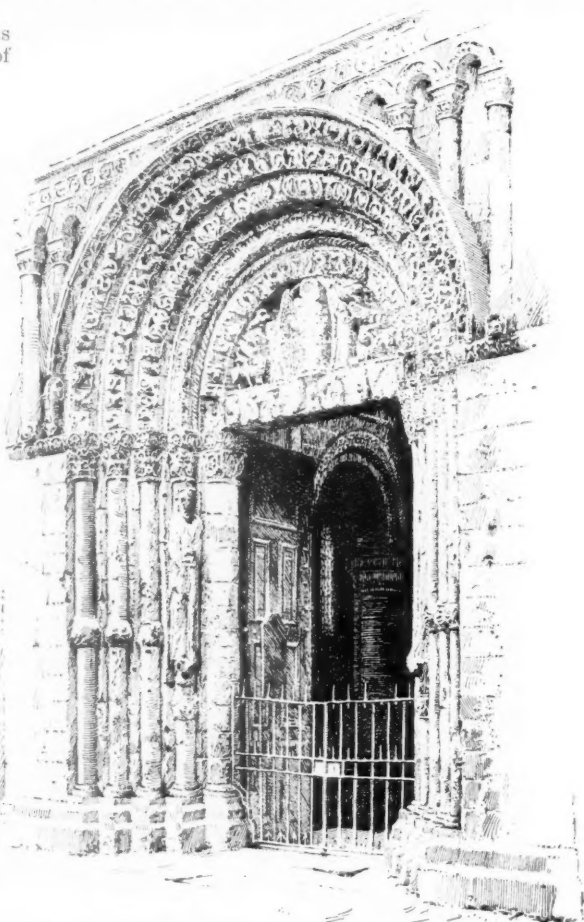
It may be said that, as Rochester's is not the most attractive of cathedrals, it is only fit and right that this history and description of it should

be less pleasing than the similar books of its fellow cathedrals. But as the least lovely of women needs to be the most careful of her attire, carriage, and deportment, it may, not without reason, be urged that an edifice whose charms are not of the greatest should have such as it does possess displayed to the best advantage.

It is not in the letter-press that this book fails to meet this requirement, but in some of its photographic illustrations, which, in several of the most prominent plates, are very dull and lugubrious productions, such as are unworthy both of the book and the building. One would think the photographer of such a view as that on page 86 was bent on presenting the venerable pile in its most drearily realistic light, utterly deprived of the happy play of sunlight and shadow which is specially delightful about old walls, while equally destitute of the clare-obscure mystery which naturally invests our most hoary fanes. Even more objectionable than the miserably dull view on page 86 is the photographic frontispiece; for here indeed we have sunlight itself represented with such falseness of effect (thanks to the ill-judged and most inartistic grouping of accessory masses of too near foliage in black shadow) as reduces Rochester Cathedral to the rank of a respectable semi-modern parish church, with no dignity of magnitude, no texture of antiquity, nor any gleam of romance to raise it above the most ordinary of commonplace. Indeed, the light is so rendered in this photograph as to convey the false impression of walls coated with smoothest and vilest of stucco, rather than faced with time-worn solid stone. It seems surprising that author, editors, and publishers should have admitted such soulless pictures into a book intended to foster that enthusiastic fondness for British cathedrals which is their best security against the ravages of time.

We reproduce an excellent drawing by H. P. Clifford of the famous Norman west doorway, which is regarded by many architects and archaeologists as one of the finest examples of its kind to be found either at home or abroad. This drawing goes far to redeem the book from the reproach of the unworthy photographs; and the description given of the doorway renders the drawing the more intelligible and interesting.

The great west doorway, like the rest of the original work remaining in the front, dates from later Norman times—the first half of the twelfth century. It is formed by five receding arches, and every stone of each of these is carved with varying ornamental designs. Between the second and third of them runs a line of cable moulding, an ornament which occurs also inside the door. Each arch has its own shaft, and the groups of five on each side are elaborately banded. The shafts have richly sculptured capitals, and in those on the south side, as well as in the tympanum, the signs of the Evangelists appear. The



THE WEST DOORWAY. (From a drawing by H. P. Clifford.)

shafts second from the door on either side are carved with statues, two of the oldest in England. These are much mutilated, but they were thought worthy of great praise by Flaxman. That on the spectator's left is said to represent King Henry I, and the other his wife, the "good Queen Maud." This attribution is probably correct, as these sovereigns were both great benefactors to the Cathedral, and were living when the front was being built. The figure of the Queen has suffered the more; it is recorded to have been especially ill-used by the Parliamentarians in the days of the great Civil War. The tympanum contains a figure of our Lord, seated in Glory, within an aureole supported by two angels. His right hand is raised in benediction, and His left hand holds a book. Outside the aureole are the symbols of the four Evangelists: the Angel of St. Matthew and the Eagle of St. John, one on each side above; the Winged Lion of St. Mark and the Ox of St. Luke, similarly placed below. A straight band of masonry crosses beneath the lunette, and has carved on it twelve figures, now much mutilated, but supposed to have represented the twelve Apostles. All the sculptured work of the portal has suffered greatly from age and exposure, and from the hand of man. In the recent restoration the coping has been renewed, the shafts have been given

separate bases once more, and many of the most worn stones have been replaced by new ones carved in facsimile. Mr. Clifford's beautiful drawing of the doorway is especially valuable, as he was able to take exact measurements of all its parts while the repairers' scaffolding was still standing. The doors that he pictures have since been replaced by a more elaborate pair, with richly scrolled hinges and strengthening bands of iron.

The author states, on the authority of Pepys, that in 1661

The great doors of Rochester Cathedral were said to be covered with the skins of Danes! The same thing has been said of the doors of Worcester Cathedral, and also of the East Anglian Churches at Hadstock and Copford. In 1848 all these doors had been removed from their original positions (the old north doors of Worcester being still preserved in the crypt); but Mr. Way succeeded in obtaining fragments of the parchment-like substance from each for microscopic examination. They were declared to be, in each case, human in their origin, and to have belonged probably to fair-haired persons.

Mr. Palmer tells us—

Troublous times fell on the church very soon after its erection, and, as Lambard says, "No marvaile is it, if the glory of the place were not at any time very great, since on the one side the abilitie of the Bishops and the Chanons (inclined to advance it) was but meane, and on the other side the calamitie of fire and sworde (bent to destroy it) was in manner continuall."

Rueful Rochester! As our author's interesting story tells, and as some of his photographic illustrations too aptly prove, ill-fate has ever haunted it, from the days of St. Augustine, who founded it, till those of the modern "photographic fiend" who libels it; and the wonder is that, in spite of such incessant misfortune, so much that is admirable and precious still remains to reward the visitor, who, with Mr. Palmer's excellent summary of the Cathedral's features and fortunes to guide and aid him, can spend hours, if not days, of deep instruction and delight in studying on the spot this sturdy and yet beautiful residue of successive glories and disasters.

Sunderland.

FRANK CAWS.

(187)

STABLES.

Stable Sanitation and Construction. By T. E. Coleman, F.S.I. 8s. Lond. 1897. [Messrs. E. & F. N. Spon, Limited.]

This excellent little volume is a treatise on stable sanitation and construction in the broadest sense, viz. as regards the efficient housing, not only of horses, but also of cattle and dogs. In the introduction the author strongly emphasises the fact that sanitary conditions are absolutely necessary to the well-being of the animals themselves, and also to the health of the community at large, notably in the case of dairies and piggeries.

The first chapter is devoted to the question of choosing suitable sites, and to the construction of external walls, with illustrations of the usual methods for the prevention of damp. A typical plan is given of a stable and accessory buildings

suitable for a country gentleman's mansion, showing the general arrangements. The following six chapters deal with the necessity of constant and efficient ventilation, and in them the author clearly and concisely explains both the natural and mechanical systems. Tables (taken from various acknowledged sources) are given of the superficial area and cubical air-space devoted to each horse in a large number of well-known stables—private, business, and military. These are exceedingly interesting, and of great value.

Chapter xiii. contains a number of plans of typical arrangements suitable for various stables, and also a scheme for one attached to a fire-brigade station, where a door is placed at the head of each stall opening directly into the engine-house, thus enabling the horses to be harnessed without loss of time. Sizes of stalls, loose-boxes, and passages are given for reference, and also a number of plans showing the most suitable arrangements for cow-houses. Water-supply, lighting, and paving occupy the next three chapters, in each of which much useful information is embodied.

The important question of drainage is treated at length, and is illustrated by drawings of a large number of fittings now in use. The author rightly deprecates the use of traps of any kind within the stable, and strongly advises the whole of the liquid sewage being carried in accessible open channels to a trapped gully outside. Roofs and doors are next considered, and tables of scantlings for the construction of the former are appended. Three chapters follow on fittings for stables, harness-rooms, and cow-houses, in which the kinds most suitable for different classes of work are illustrated and described.

Two chapters are devoted to piggeries and kennels. As regards the former, the author strongly condemns the usually filthy condition in which they are kept, and points out that epidemics and diseases common to pigs are produced from this cause. Undoubtedly the stables for these animals should be as sanitary as those for other cattle, although it is a little doubtful if the pigs would not, from a personal point of view, prefer the more congenial habitation.

An essentially useful chapter is that on the approximate cost of the several kinds of buildings. Naturally, locality and other conditions will regulate this question to a large extent; but for the purpose of forming an idea of the necessary expenditure the information will be most helpful. The final chapter contains the various legislative measures relating to these buildings.

The work contains 183 illustrations; but, unfortunately, some of them have been necessarily so much reduced from the drawings as to render the figuring and lettering almost illegible. Generally, the book embraces a large amount of useful information in a compact form, and concludes with an admirable index for reference.

R. STEPHEN AYLING.

N N



9, CONDUIT STREET, LONDON, W., 12th March 1898.

CHRONICLE.

The Prizes and Studentships 1898-99.

The pamphlet giving particulars of the Institute Prizes and Studentships for 1898-99 is issued to members with the present number of the JOURNAL. There is an important change in the conditions of one Studentship to which it is desirable that special attention should be directed. For some years the "Owen Jones Fund" has been increasing, and lately it has benefited under Owen Jones's will by the death of an annuitant, Hannah Jane Jones. It has therefore been decided by the Council that the Owen Jones Studentship should be £100 in value, and that the tour of the Student should be of not less than six months' duration. Certain modifications have also been made in the regulations for the "Arthur Cates" Prize.

The following is a brief summary of the subjects set and the general conditions:—

THE ESSAY MEDAL AND TWENTY-FIVE GUINEAS, open to British subjects under forty years of age.—*Subject*: "The Use and Value of Colour in Architecture."

THE MEASURED DRAWINGS MEDAL AND TEN GUINEAS, open to British subjects under the age of thirty.—Competitors must submit their own measured drawings of any important building, classical or mediæval, in the United Kingdom or Abroad.

THE SOANE MEDALLION AND £100, open to British subjects under the age of thirty.—*Subject*: Design for a Concert Hall to seat 2,500 persons.

THE PUGIN STUDENTSHIP (Silver Medal and £40), open to members of the profession (of all countries) between the ages of eighteen and twenty-five.—Awarded to the candidate who submits the best selection of drawings (by preference measured drawings of Mediæval Buildings) and testimonials.

THE GODWIN BURSARY (Silver Medal and £40), open to members of the profession without limit of age.—The object of the Bursary is to encourage the study of works of modern architecture abroad.

and candidates must submit selections of practical working drawings, or other evidence of special practical knowledge, and testimonials. The knowledge of at least one foreign language is a necessary qualification.

THE OWEN JONES STUDENTSHIP (Certificate and £100), open to members of the profession under the age of thirty-five.—Candidates must submit testimonials with drawings, some of which must be from existing buildings, and other examples, exhibiting their acquaintance with colour decoration and with the leading subjects treated of in Owen Jones's *Grammar of Ornament*.

THE TITE PRIZE (Certificate and £40), open to members of the profession under the age of thirty.—*Subject*: A Royal Mausoleum, not exceeding 12,000 feet in area.

THE GRISSELL PRIZE (Gold Medal and ten guineas), open to British subjects who have not been in professional practice for more than ten years.—*Subject*: A Fruit, Flower, and Vegetable Market for a small provincial town, on any open site of 100 feet square. The market to be covered with iron and glass; roof supported on iron columns.

THE ASHPITEL PRIZE (Books to value of ten guineas), awarded to the Student who most highly distinguishes himself in the Final Examinations 1898.

THE ARTHUR CATES PRIZE (Books to value of ten guineas).—This prize will be given by Mr. Arthur Cates at each Final Examination, until further notice, to the Student (successful in passing the Examination) whose Testimonies of Study, together with certain specially prepared sheets of drawings, are considered by the Board best to merit the Prize.

The President at Cardiff and Birmingham.

The President, Professor Aitchison, R.A., represented the Institute at the Annual Dinner of the Cardiff, South Wales, and Monmouthshire Society on the 19th ult., when Mr. C. B. Fowler [F.], the new President of the Society, occupied the Chair. Responding to the toast of "The Local Society and the Royal Institute," the Professor said that one of the objects that each district and each town should aim at was to impart a local character to its architecture, for not only had each town and district a landscape and character of its own, but it was to be supposed that the inhabitants themselves were not exactly like the rest of Britain; and as the French *gourmets* say of wines of different parts that they have "a smack of the soil," which they appreciate and admire, so ought our local architecture to have it too. The Institute, by its magnificent Library, had done much to open a study for architects of the great world of other climes and other ages, and had conferred a distinct boon on the profession by establishing an examination for Associates, which

had greatly improved the knowledge of the art. He was pleased to hear the praises of the Institute's exertions at the Brussels Conference. The ideal of architecture was to make its works like those of Nature, perfectly fitted to their ends, and endowed with the proper character. No effort was too great to give a proper character and distinction to our country's monuments, and make them to equal or to surpass those of the great architectural epochs of other countries and other towns, so that people from all parts of the world should come to see those of England, as they now go to Greece, to Rome, to Italy, and to France, to see what is stately, magnificent, or sublime. The young architects of the day were striving to master all the knowledge requisite for the full development of the art, and he looked forward to the day when their efforts would burst forth in a way that would astonish the world, as Tennyson said of the dragon-fly:

An inner impulse rent the veil
Of his old husk; from head to tail
Came out clear plates of sapphire mail.
He dried his wings: like gauze they grew;
Thro' crofts and pastures wet with dew
A living flash of light he flew.

On the 4th inst. the President delivered an Address to a fully attended meeting of the Birmingham Architectural Association at the Queen's Hall, Birmingham, Mr. C. E. Bateman, President of the Association, in the Chair. The President impressed upon his hearers that architecture was pre-eminently a constructional art, and it was necessary that one who professed to be an architect should know enough of statics to be able to gauge the security of walls against the pressure of the wind, water, and earth, and even against the pressure of goods stowed against them that had an inclination to slide. He must know the pressure exercised by vaults, domes, and arches, and learn how these might be properly abutted, as well as understand how to prevent walls, piers, and columns becoming forced out of the vertical. Unless a man knew the outlines of construction he could hardly be called an architect, although he might be an admirable designer and planner. In planning it was important that each room, passage, and staircase should be as well adapted as possible to the uses to which it was to be put. The whole should be packed into as convenient a space as possible, so that there might be no lost room, and the most frequented apartments should be conveniently situated. All public buildings should be well planned, and striking or impressive to look upon. The great thing a man who could plan and construct ought to know was how to make the necessary portions of the building he was putting up tell the tale they were required to tell. Too little attention was paid to that matter in England, for they saw all kinds of incongruous ornaments and decora-

tions put on all sorts of places. It was probably ten times more difficult to get a thing to look well that was simple than if it were ornamented. Great ornateness was a mistake, for it was never equal to the perfection that could be obtained by the utmost possible simplicity. Those who felt they had divine genius for architecture should use that precious gift properly, and let no labour and no difficulty overcome their desire to make themselves skilful.

Cement Admixtures.

The investigations into the subject of cement admixtures entered upon three years ago by the Cement Trade Section of the London Chamber of Commerce have now reached completion, and the conclusions arrived at have been made public in a circular, a copy of which has been forwarded to the Institute by the London Chamber of Commerce. The circular states that the Section instructed Messrs. Stanger & Blount to make extensive experiments with mixtures of Kentish ragstone with Portland cement, and obtained valuable evidence from various experts. The net results are summed up in the following conclusions of Messrs. Stanger & Blount:—

"Ragstone is a natural form of calcium carbonate mixed with siliceous matter. It is an inert substance, incapable of setting when gauged with water."

"Ragstone, when mixed with Portland cement, undergoes no chemical change, and does not combine with cement either in the dry state or when the mixture is gauged with water."

"Mixtures of ragstone and cement have a specific gravity lower than that of unmixed cement, and, indeed, correspond closely in specific gravity with that calculated from the respective specific gravities of the two materials. The specific gravity of normal ragstone may be taken as 2.70, and that of normal cement as 3.15, so that the difference between them is substantial."

"Save for minor effects, caused by the slight slaking action of moisture commonly present in ordinary ragstone, the part played by ragstone mixed with cement is purely mechanical. The product obtained from the two materials is merely a mechanical mixture, and is in no sense a chemical combination. In our opinion such a mixture cannot correctly be termed Portland cement."

"Gypsum added to cement, for the purpose of regulating the setting time, in quantities not exceeding 2 per cent. of the weight of the cement, has no deleterious influence on the quality of the cement."

The circular goes on to state that, with respect to other materials, Messrs. Stanger & Blount are unable to give a general opinion as to their influence on cement when mixed with it, and that they would have to report separately as to each after long and careful investigation; and they express a strong opinion, in conclusion, that, whatever be the effects, whether good or bad, of the admixture of any material whatever with Portland cement clinker after calcination, the article so produced cannot legitimately be termed Portland cement. Each of the other experts examined endorsed this view, which the Section have approved and adopted.

The circular quotes the following passages from a recent paper read by Messrs. Stanger & Blount before the Society of Chemical Industry :—

"Ragstone is not a cementitious substance, and its addition to cement is an adulteration.

"Perfectly sound cement is weakened by the addition of ragstone.

"This weakening is not fully proportional to the percentage of ragstone added, because the latter acts as a fine filling material, and fills up the interstices naturally present in set cement.

"Cement which is not perfectly sound may be temporarily improved by the addition of ragstone. When the cement has become sound by aëration, this improvement disappears.

"Many minor points were examined and determined in the course of the main investigation, but the most important results are embodied in the conclusions given above.

"*Additions to cement other than ragstone.*—One of these which particularly came within our purview in the course of our investigation for the London Chamber of Commerce is gypsum. Gypsum is largely used in Germany, and to a considerable extent in this country, in quantities not exceeding 2 per cent., and usually smaller than this, in order to lengthen the setting time of the cement. Regarding cement as a chemically finished product in the state in which it comes from the kilns, needing nothing but mechanical comminution to make it saleable, the addition of any substance to the finished clinker must be considered in strictness an adulteration. Thus gypsum becomes under this definition an adulterant. Nevertheless, it is added for a distinct and useful purpose, and, in quantities smaller than 2 per cent., does not affect the cement injuriously, so far as our experiments indicate.

"The last and worst adulterant with which it is our purpose to deal is blast-furnace slag. As far as our experience goes, this most objectionable addition to Portland cement is not employed on the Thames and Medway, but in certain other districts it is used in large quantities for the preparation of a grossly sophisticated product which is fraudulently sold as Portland cement.

"We must not be understood as condemning true slag cement, made by mixing granulated blast-furnace slag with slaked lime, and sold under its proper title. This material is a perfectly legitimate product, and has its own uses. No one can reasonably object to its utilisation if it is not covertly substituted for Portland cement. But the addition of blast-furnace slag to Portland cement is another matter altogether. The general practice of the manufacturers who seek to increase their profits by the use of slag appears to be to add to the clinker, as it goes to the crushers, as much crude blast-furnace slag as they consider can be mixed with Portland cement without risk of detection by the ordinary consumer, who buys cement in quantities so small that the cost of its analysis is too great for him to pay. The quantity added may be as much as 30 or 40 per cent., and detection is not easy, or even always possible, for an unskilled observer. Apart from the fraudulent character of this addition, about which no doubt can well be entertained, there arises the question of its effect on the cement. . . ."

"All materials added to Portland cement after the clinker comes from the kilns are adulterants, with the exception of gypsum, which is a recognised addition for a specific purpose in quantities not exceeding 2 per cent. Of the two adulterants which have been specially dealt with—viz. ragstone and blast-furnace slag—the latter is by far the more objectionable, and it should be condemned and rejected by makers and users alike. In this view we believe we are supported by the great majority of engineers and manufacturers."

As a result of their investigations the Section have adopted the following resolution :—

"That Portland cement be defined as a mixture of two or more suitable materials, intimately and artificially mixed in the requisite proportions, and afterwards properly calcined and ground, to which nothing has been added during or after calcination, excepting that an addition not exceeding 2 per cent. of gypsum is permissible for the purpose of regulating the setting.

"That the following rule be adopted :—

"That if any material whatever, excepting 2 per cent. of gypsum for the purpose of regulating the setting, be added to the Portland cement clinker during or after calcination, the article so produced shall not be sold as Portland cement, but under some other distinctive name.

"That the members of the Cement Trade Section of the London Chamber of Commerce, together with all manufacturers of Portland cement in Great Britain and Ireland who are not members of that association, be invited to sign the following declaration of conformity to the above rule in respect of all Portland cement made by them, wherever manufactured.

"DECLARATION.

"We, the undersigned, hereby agree to conform to and carry out the rule of the Cement Trade Section of the London Chamber of Commerce as set forth in a report made by the Section and adopted at a meeting held on Monday, the 10th May 1897—

"That if any material whatever, excepting an amount not exceeding 2 per cent. of gypsum for the purpose of regulating the setting, be added to the Portland cement clinker during or after calcination, the article so produced shall not be sold as Portland cement, but under some other distinctive name."

"And we further agree that if at any time any of the parties to this agreement shall by resolution of a majority of those present at a meeting of such parties duly and properly convened in accordance with the practice of the London Chamber of Commerce, such resolution having been duly and properly confirmed by a majority of those present at a subsequent meeting called at not less than fourteen days' notice, be found to have failed to conform to and carry out the said rule, then in such case his or their name or names shall be struck off the list, and notice of the same made public in such manner as shall be resolved."

The circular contains the names of forty-four firms in England and Wales who have signed the Declaration.

Obituary.

Mr. James Edmeston, who died on the 6th inst., had been a member of the Institute for forty-two years [*Associate* 1856, *Fellow* 1859]. He served on the Council in the years 1868, 1869, and 1876, and was till quite recently Chairman of the Architectural Union Company, owners of the Institute premises. He was one of the oldest members of the City Corporation, and Deputy of the Broad Street Ward.

News has been received of the death of Mr. Herbert Stone Wood, which occurred on the 22nd December last. He was elected *Associate* in 1890, and was awarded the Scientific Masonry Prize in 1891.

NOTES, QUERIES, AND REPLIES.

The Mediæval Campanili of Rome.

From Professor BALDWIN BROWN [H.A.], M.A.—

Mr. Tavenor Perry's Paper on the Roman Campanili opens up several questions of interest. One is the old and still unsolved problem of the date and rationale of the earliest towers connected with Christian ecclesiastical buildings; another, the epoch of erection of the particular group of towers for which Rome is famous; a third, the possible connection of these last with the numerous towers in our own country that are pre-Conquest in style, if not always in actual date. With regard to the first, Mr. Tavenor Perry justly remarks that towers were by no means unfamiliar objects in the Roman world of Imperial times. It is clear, however, that there was no direct continuity in tower-building from the pagan to the Christian era, for there is no evidence of the erection of ecclesiastical towers before, at any rate, the sixth century, and it is noteworthy that no such feature makes its appearance in the two views of groups of early Christian buildings on a Lateran sarcophagus of the middle of the fourth century, or in the view of Ravenna churches in a mosaic in S. Apollinare Nuovo, dating about the middle of the sixth. The reason for the towers is only clear in the case of the Irish group, which were certainly towers of refuge, and in that of the towers on the plan of St. Gall, which are expressly denoted as places of outlook. There are several other theories as to their origin, and the latest authorities, Dehio and Von Bezold, are inclined to go back to the view of a derivation from Islam. Mr. Tavenor Perry gives prominence to the theory that they were from the first bell-towers, and this would follow naturally if the Roman Campanili are accepted as early, for they are supplied with very ample belfry openings. It may be noted that in the quotation from Cattaneo, at the top of p. 219 (*JOURNAL*, February 26), about cylindrical "bells" of the sixth century at Ravenna, the reference really is to bell-towers, not bells,* and there is no reason to believe that very large bells were known at that epoch. In the time of Charles the Great, however, a bronze-worker cast a bell for which he professed to need a great quantity of copper, and no less than one hundred pounds of silver. This silver he embezzled, and when the bell had been hung in a bell-tower, the clapper of it fell on his head and passed right through his body to the ground—all of which gives an idea of a sizeable piece of work.† There does not seem to be any reason for giving to Italy

priority in the manufacture of bells, for the words for "bell" in German, French, English, and Gaelic are northern, and not Italian, in origin. The Irish were devoted to bells, but their towers were not originally erected for their accommodation.

Mr. Tavenor Perry's beautiful drawings enable the readers of his Paper to form a clear idea of the particular group of towers about which he writes, and it is not to be wondered at that the style of them has led many authorities to place them at a comparatively late epoch. The repetition of divisions, the salience of the string-courses, the multiplication and amplitude of the openings, and the lightness of effect secured by the use in them of slender shafts, would in themselves suggest the twelfth century rather than the eighth, ninth, or tenth. Such a tower as the older (Southern) Campanile at S. Ambrogio, Milan, with its small openings, and plain walls unbroken by string-courses, would, in point of style, seem to accord better with an early date than the Roman examples. Against this natural predisposition the writer of the Paper brings forward some weighty arguments. There is, of course, clear literary evidence that there existed towers of these earlier dates at Rome, as elsewhere in Europe, and Mr. Tavenor Perry contends that in the main the existing Roman Campanili are the same that are thus referred to. We may take it that he has satisfied himself by his technical examination of them that they seem, as a rule, to be of one date, and that he would not accept the suggestion of Mothes that the lower stages may be early, while the upper ones were added at a later period. The contention of the last-named writer, that the use of slender shafts instead of piers to divide the openings is a sign of advanced date, is a good deal shaken by the fact that small shafts of the kind appear to have been used in the Campanile of S. Apollinare in Classe, Ravenna, that has the best claim of any existing tower to be a work of the sixth century, while they are still to be seen adorning the outside of that invaluable monument, the front of the palace of Theodoric at Ravenna, a work of about 500 A.D. We find here, too, the brick pilasters, and what Cattaneo's translator calls "little pensile arches," so characteristic of the Campanile. On the other hand, it must not be forgotten that such small shafts are equally characteristic of the "Pisan style" of the eleventh-twelfth century in Tuscany, and that the bell-tower of S. Martino, Lucca, which cannot be earlier than the rebuilding of that church, about 1070 A.D., has its openings treated in almost exactly the same way as the Roman examples shown in Mr. Tavenor Perry's drawings.

The question of the possible influence exercised on pre-Conquest towers in England is one of great interest. One distinguishing mark of these towers, which separates them from those in the Norman style, is the absence of recessing in

* Cattaneo's English translator, who has enriched our language with so many new architectural terms, speaks in the next sentence to the one here quoted of a "bell" with "great twin doors," and "friezes with little pensile arches," which certainly suggests a "bell-tower" rather than a "bell."
† Pertz, *Scriptores*, ii. p. 744.

the openings. Like the windows in the Roman Campanili, these are pierced straight through the wall, and the pier or shaft that divides them has to be made to sustain the whole thickness of the masonry. The device of doubling the supports, which Mr. Perry notices in the case of the cloisters of St. Paul and St. John Lateran, at Rome, of the twelfth century, was employed centuries before at S. Costanza, Rome, and the baptistery at Nocera; but it does not occur in the Campanili or in the English towers—save, perhaps, in a very modified form at Earl's Barton. The common plan at Rome, as readers of the Paper will have seen, was to set a single shaft in the middle of the thickness of the wall, and surmount it with a capital corbelled out to an extent sufficient to sustain the masonry above. The normal English plan was not the same as this. In all but exceptional cases the mid-wall shaft, either with or without a capital, is placed under a through-stone, or long impost, running through the thickness of the wall, and generally projecting a little on each face. This stone sustains the masonry, and the one shaft is enough for its support below. An exceptional case is the following. A true corbel capital takes the masonry in the belfry openings of the tower of Sompting, Sussex, and is sustained below by a straight mid-wall shaft. This resembles the normal Roman corbel caps, but is adorned beneath with elongated volutes. It needs no through-stone above it, as it spreads to a length of about 2 ft. 4 in., and is sufficient for the work to be done. The belfry stage at Sompting has this further resemblance to the Roman examples, in that it has two double openings on the north and south faces, while our pre-Conquest towers, as a rule, have only one. Here, however, the resemblance seems to end, for Sompting tower is terminated above in a manner unrepresented at Rome, and strongly indicative of German rather than Italian influence. A bracket capital, not so developed as that at Sompting, is used in an opening on the southern face of the tower at Jarrow, Durham, dating posterior to 1075.

The characteristic feature of the belfry openings, in almost all our early towers, is the long flat through-stone which seems in some sense a national peculiarity, though it does occur on the Continent. The through-stones are supported below in four different ways: (1) by baluster shafts that never, I think, except in the examples at St. Albans, have regular caps. These balusters are no doubt ultimately Roman, but they are not common in Italy, and I have never noticed them in Italian belfry openings. (2) By plain shafts without capitals. These are only found in rudely-built examples. (3) By shafts, round, octagonal, or at times oval in plan, of proportions similar to those in the Roman Campanili, but supplied with capitals that are square in plan; or else (4) are corbelled out so as to measure more

in the direction of the thickness of the wall than on the other face. These capitals form an interesting group, as some of them are elaborately carved, and occur in abundance, especially in Lincolnshire and the adjacent counties. Corbelled ones are to be seen at Glentworth, Great Hale, Alkborough, Clee, and other places in the first-named county, and at Monk Fryston, near Selby, Yorks. That on the northern face of Glentworth tower is the most pronounced example of such corbelling I am acquainted with, but it does not extend nearly to the thickness of the wall.

As Mr. Tavenor Perry has so justly pointed out, Italian influence must certainly be reckoned with in connection with our pre-Conquest remains, and his suggestions in this direction are a valuable part of his interesting Paper.

Edinburgh.

The Father of the late William Burn, Architect.

From JOHN HEBB [F.]—

A letter from the poet Burns to Peter Hill, inclosing 6l. 1s., and authorising him to pay 5l. 10s. to Mr. Robert Burn, architect, "for erecting the stone over poor Fergusson," dated Dumfries, 5th February 1792 (two pages, folio), was sold on the 7th February last, at the sale of Mr. A. C. Lamb's library, at Edinburgh, for 30l. 9s. The Robert Burn referred to in this letter was a successful Edinburgh builder, and the designer of the Nelson Monument on Calton Hill, which is described by Groome (a Scotchman) in his *Gazetteer of Scotland* in the following terms:—"On the summit of Calton Hill is one of the ugliest monuments in Edinburgh—the curious butter-churn structure by which the public taste saw fit to perpetuate the memory of Lord Nelson." Robert Burn was the father of the late Mr. William Burn, of Stratton Street, the architect of Montagu House.

The stone erected by Burn in the Kirkyard of Canongate, Edinburgh, is a simple headstone, with the following inscription:—

Here lies Robert Fergusson, poet.

He was born 5 Sept. 1751 and died 16 Oct. 1774.

No pageant bearings here, nor pompous lay,

No storied urn nor animated bust:

This simple stone directs old Scotia's way

To pour her sorrows o'er her poet's dust.

"Modern Architecture."

From R. LANGTON COLE [A.]—

Mr. Statham is careful, as a rule, to discriminate in his new book between modern designs and modern buildings, but on pp. 78 and 89 there are exceptions which should, I think, be noted. On p. 78 he refers to "the rings of darker-coloured stone" in the columns of Sedding's Church of the Holy Redeemer at Clerkenwell, and the rings are shown in the illustration. Now, the columns have no rings (or had none recently), and they are not of stone, but of cast-iron, covered with plaster, like the iron girders concealed by the

entablature. It is probably this iron construction, strengthening the beams and columns and increasing the spans, which gives the "quite different" appearance to the interior on which the author comments; and this use of iron in church architecture here, and in Mr. Aston Webb's Huguenot church in Soho Square, might well have been referred to in the final chapter.

On p. 89 is an illustration of Mr. Brooks's design for the Church of the Good Shepherd, Hampstead. This church is, I understand, now known as All Hallows; the building is stopped for want of funds, but, when completed, it will have an open timber roof, so that the special feature noted (the termination of the vaulting ribs) will have no existence, and the design will be varied in other respects as well.

All architects will be grateful to Mr. Statham for his contribution towards a study of modern architecture; but may we hope it is only a contribution, and that a larger work, describing for us some of the notable buildings in our own country and elsewhere, for which there is no space in this publication, may follow it before many years have passed?

MINUTES. IX.

At a Special General Meeting, held Monday, 7th March 1898, at 8 P.M., the Chairman, Mr. W. M. Fawcett, M.A., *Vice-President*, moved that, subject to Her Majesty's gracious sanction, the Royal Gold Medal for the promotion of architecture be presented to Professor Aitchison, R.A. The motion having been seconded by Mr. H. L. Florence, *Vice-President*, it was

RESOLVED, *nem. con.*, that, subject to Her Majesty's gracious sanction, the Royal Gold Medal for the promotion of architecture be presented this year to Professor Aitchison, R.A.

The Meeting then terminated.

At the Ninth General Meeting (Business) of the session, held Monday, 7th March 1898, at the close of the Special General Meeting above referred to, Mr. W. M. Fawcett, M.A., *Vice-President*, in the chair, the Minutes of the Meeting held 21st February 1898 [p. 237] were taken as read and signed as correct.

A list of donations to the Library [see *Supplement*] was taken as read, and an expression of the thanks of the Institute to the several donors was ordered to be entered on the Minutes.

The Chairman announced that the Council had resolved to increase the value of the Owen Jones Studentship from £50 to £100, and that the holder of the Studentship would be required to make a tour extending over six months, such tour to be devoted to the improvement and cultivation of his knowledge of the successful application of colour as a means of architectural expression.

The following candidates for membership were elected by show of hands, under By-law 9, namely:—

As Fellows.

GEORGE LETHBRIDGE [A.]
EDWARD THOMAS BOARDMAN (Norwich).

As Associates.

LAURENCE HOBSON (*Probationer* 1893, *Student* 1896, *Qualified* 1897, *Arthur Cates Prizeman*, *November* 1897).

WILLIAM CHARLES HULBERT (*Qualified* 1897).
JOHN ORMROD (*Probationer* 1891, *Student* 1895, *Qualified* 1897).

DUDLEY CHRISTOPHER MAYNARD (*Probationer* 1893, *Student* 1895, *Qualified* 1897).

TIMOTHY HONNOR (*Probationer* 1889, *Student* 1891, *Qualified* 1897).

HARRY JOHN PEARSON, F.S.I. (*Probationer* 1895, *Student* 1897, *Qualified* 1897).

RALPH HENRY MORTON (*Probationer* 1890, *Student* 1894, *Qualified* 1897).

HERBERT SHEPHERD (*Probationer* 1892, *Student* 1894, *Qualified* 1897).

WILLIAM McCULLOCH (*Qualified* 1897). St. Andrews, Fife.

JOHN FREDERICK DUTHOIT (*Probationer* 1892, *Student* 1895, *Qualified* 1897). Dover.

HENRY ALBERT COLLINS (*Qualified* 1886).

The proceedings then closed, and the Meeting terminated at 8.20 P.M.

ARCHITECTS' BENEVOLENT SOCIETY.

Report of the Council.

Adopted at the Annual General Meeting, 9th March 1898.

The Council of the Architects' Benevolent Society, in presenting their Annual Report, have much pleasure in recording the fact that the progress in the Society's affairs during the past few years has been maintained in the year under notice. In view of the many calls upon the means of private individuals during the past year, the Council did not think it advisable that any special appeal on behalf of the Society should be made to the architectural profession; nevertheless, they have the satisfaction to report that many liberal donations have been received by the Society, and that several new names have been added to the list of subscribers.

Although the Society now possesses three hundred annual subscribers, the Council feel that this number is not sufficiently representative of the large body of architects practising in the United Kingdom; they are assured that there must be a large number of architects, not subscribers to the Society, who would be desirous of helping their less fortunate brethren, or their widows and children who have been left insufficiently provided for. The usefulness of the Society would be increased in proportion to the augmentation of its list of subscribers; and the Council would remind those who have not contributed to the funds of the Society that an annual subscriber of one guinea has the privilege of recommending two applicants for grants during the year, and that relief is always afforded to worthy and properly accredited applicants when there are funds available for the purpose. It is earnestly wished that the list of annual subscribers should be increased, and members of the Society might materially help in effecting this object by bringing its aims and work under the notice of their brother architects.

The amount received in annual subscriptions during the year was £456 10s., as against £453 8s. in 1896. Four members have withdrawn, and twelve members were in arrear with their subscriptions when the books were closed for the year; and the following gentlemen have recently become annual subscribers:—Sir Benjamin Baker, Messrs. J. Wallis Chapman, Charles Henman, Delissa Joseph, C. W. Lovett, E. W. Mountford, Alfred Williams, Latham A. Withall, and Alfred B. Yeates.

The Capital Account has been increased by the bequests of £100 each of Mr. David Mocatta and Mrs. Ann Mocatta, and by the following donations:—The Merchant Taylors' Company £21, John o' Gaunt Sketching Club

